DATA SHEET

3Com® SuperStack® 3 Switch 3870 24- and 48-Port Stackable Switches

Key Benefits

Scalability
Enhanced Layer 2 10/100/1000 LAN switching solution delivers scalable wirespeed Gigabit performance, with integrated stacking up to eight units high, or 384 Gigabit ports, with high-bandwidth 40Gbps stacking. Stack-wide link aggregation enables high-performance connectivity to the core of the network, with up to eight ports from different units aggregated together to improve resiliency and uptime.

Performance
24 or 48 built-in copper Gigabit ports, including four dual-purpose ports supporting copper links or SFP adapters for easy, flexible connection to fiber-based Gigabit media.

Port-based rate-limiting enables the bandwidth on each port to be restricted, so power users can receive the full bandwidth available while non-key users can be throttled down, preserving network bandwidth and allowing maximum control of network resources. Built-in packet prioritization gives optimal performance to real-time applications such as voice and video.

Future Protection
Gigabit to the desk prepares your network for the future at prices comparable to those of some 10/100 switches. Tri-speed operation at 10-, 100-, and 1000Mbps allows easy migration to Gigabit speeds.

Investment protection is further enhanced with switching silicon designed to support multilayer switching, and a module slot with 10Gbps connections capable of supporting high-speed Ethernet.

Ease of Use
Automatic selection of the optimal speed and duplex mode of cables connected to it prevent mis-configuration of the network. The switches also detect and adjust to cross-over or straight-through cable connections—a feature called auto MDI/MDIX—eliminating the need for specific cables.

Security
IEEE 802.1X network login enables intrusion prevention on the network, requiring users to authenticate with a central standards-based RADIUS server for ease of management; unauthorized users are kept off the network.

Management of the switch can be implemented using Secure Shell (SSH) and Secure Sockets Layer (SSL / HTTPS) encryption, preventing unauthorized remote access to the switch over IP networks or from a web browser.

Network Control
Network management can be done through the embedded web interface, command line interface, or an SNMP management station. This can be further simplified with the use of 3Com Network Supervisor for configuration and troubleshooting of multiple devices on the network.

3Com® SuperStack® 3 Switch 3800 family switches deliver wirespeed Gigabit Ethernet switching, with ten times the performance of 10/100 desktop switching but at similar prices. Tri-speed operation of the switch enables backward compatibility with existing devices, such as printers, while still allowing new PC's and servers to operate at their maximum potential.

The two SuperStack 3 Switch 3870 models are stackable, up to eight units high, for impressive scalability. The switches come with integrated dual full duplex 10Gbps stacking ports on the back of the unit, providing a total stacked capacity of 40Gbps, and support for single-entity IP management of all units in the stack.

These switches also have notable investment protection capabilities. Along with the built-in 10Gbps stacking ports, each Switch 3870 also has an expansion slot capable of supporting an additional 10Gbps full duplex (20Gbps total) high-speed Ethernet connection. This enables the 156Gbps switching capacity to provide wirespeed switching on all ports.

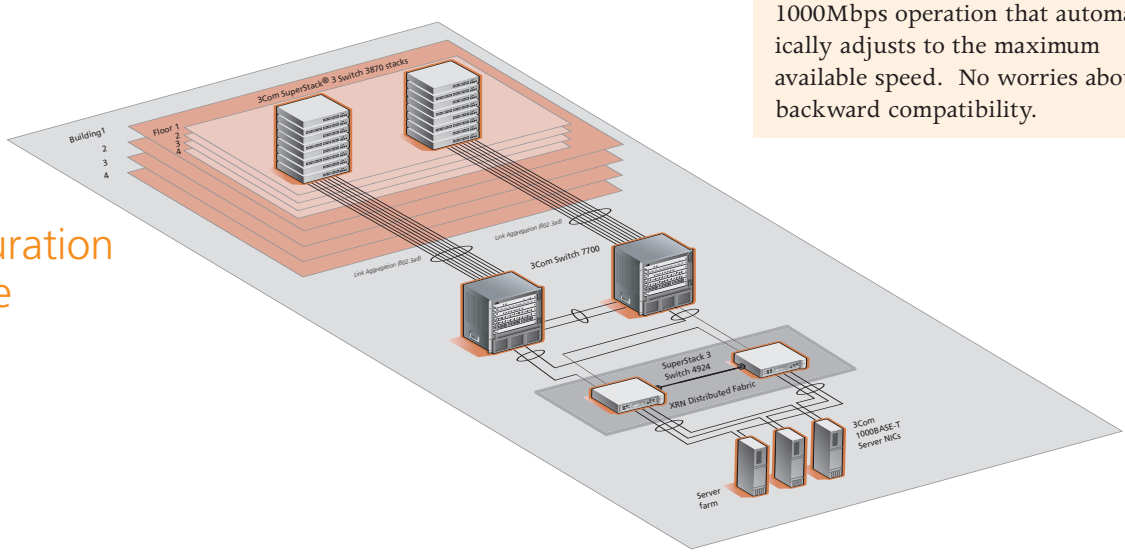
Concerned about network security? SuperStack 3 Switch 3870s support IEEE 802.1X network login security to help ensure all users are authorized before being granted access to any network resource.

Why Gigabit to the Desk?

It is time to consider "Gigabit to the desk" as an alternative to 10/100 switching:

- Give users a 10x improvement in performance. Reduce network latency. Prepare the network for supporting high quality video and voice communication.
- Pricing for Gigabit is closer and closer to that of 10/100 switching, making it wise to make the move now to the higher speed.
- Gigabit speeds are increasingly being supported by new servers and workstations. Prepare the network to deliver optimum speed.
- Migration is easy, with tri-speed operation, with 10-, 100-, and 1000Mbps operation that automatically adjusts to the maximum available speed. No worries about backward compatibility.

Configuration Example



Features

Performance	
	Switching capacity: SuperStack 3 Switch 3870 24-port, 108 Gbps; Switch 3870 48-port, 156 Gbps Forwarding rate: 24-port, 80 Mpps; 48-port, 115 Mpps Store-and-forward switching
Layer 2 Switching	
MAC Address	16K MAC addresses 1024 secure MAC addresses
VLAN	255 VLANs (IEEE 802.1Q)
Link Aggregation	IEEE 802.3ad (LACP), Gigabit ports only 32 trunk groups (up to 8 ports in each), trunking across stacked units
Auto-negotiation	Auto-negotiation of port speed, duplex, and connection (MDI/MDIX)
Traffic control	IEEE 802.3x full-duplex flow control Back pressure flow control for half-duplex Broadcast Storm Control (500-200,000 pps limit)
Spanning Tree	IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) Backward-compatible with STP Fast-start mode Spanning tree enable/disable per port
Multicast Snooping	Filtering for 64 multicast groups IGMP v1 and v2 IGMP Querier
Jumbo Frames	Supports 9K packets
Stacking	
	Switched 40Gbps on each switch Up to 8 units high Resilient loop back Hot-swap units Single IP address for stack management
Convergence	
Priority Queues	Eight hardware queues per port Strict priority Weighted Round Robin queuing
Traffic Prioritization	Priority based on: • DSCP (DiffServ Code Point) • IEEE 802.1p Class of Service (CoS) priority • TCP/UDP destination port number • Default port priority • Auto classification of 3Com NBX® telephony traffic
Bandwidth Management	Port-based bandwidth management: • 1 Mbps increments (Gigabit ports)

Features, continued

Security	
Network Login	IEEE 802.1X user authentication • RADIUS authentication • Secure Mode (locks MAC address)
Packet Filtering	Port-based Access Control Lists (ACLs) • Filtered on destination IP address / mask
Switch Protocol Security	MD5 cipher-text and clear-text authentication
Switch Management	RADIUS management of switch passwords Trusted IP Management Addresses Telnet • SSH v2 (56bit DES) SSL (HTTPS) • 40 Bit • 56 Bit DES
Resiliency	
	Support for 3Com Advanced Redundant Power Supply; provides backup power to the switch Dual software images Backup and restore of switch settings
Management	
Remote Management	SNMP v1, v2
Software	Dual software images Backup and restore TFTP configuration: upload/download TFTP agent: upload
Configuration	Command line Serial (RJ-45 supplied) Telnet Web-based SNMP
Time	SNTP
Mirror port / RAP (Roving Analysis Port)	One-to-one (across stack)
RMON (Remote Monitoring)	Four groups: statistics, history, alarm, and events
IP address allocation	DHCP Manual
Switch access levels	5 user accounts
Remote GUI management	3Com Network Supervisor *(copy provided with product)* • Topology discovery • Change management reporting • Capacity planning • Event logging • Fault identification and troubleshooting • Utilization monitoring

Specifications

All information in this section is relevant to both models of the 3Com SuperStack 3 Switch 3870, unless stated otherwise.

Port Capacities
24-Port:
20 10/100/1000 ports
4 dual-personality 10/100/1000 or SFP Gigabit ports
48-Port:
44 10/100/1000 ports
4 dual-personality 10/100/1000 or SFP Gigabit ports

Dimensions
Height: 45 mm (1.7 in or 1U)
Width: 440 mm (17.3 in)
Depth: 415 mm (16.4 in)
Weight: 5.0 kg (11.0 lbs)

Performance
24-port:
Bandwidth: 108 Gbps
Throughput: 80 Mpps
48-port:
Bandwidth: 156 Gbps
Throughput: 115 Mpps

Power Supply
Input voltage: 100-240 VAC autoranging
Operating frequency: 47-63 Hz
Current Rating: 2A maximum
Heat dissipation: 717 BTU (210W)

CPU
MPC8245 (466Mhz)
32MB Flash memory
128MB Processor memory

Packet Buffer Memory
24-port: 2MB
48-port: 4MB

Environmental Requirements
Operating temperature:
0° to 40°C (32° to 104°F)
Storage temperature:
-40° to 70°C (-40° to 158°F)
Humidity:
10% to 90% non-condensing

MTBF
24-port:
31 years (268,000 hours)
48-port:
21 years (184,000 hours)

Industry Standards Supported
Ethernet Protocols
IEEE 802.1p (CoS)
IEEE 802.1Q (VLANs)
IEEE 802.1w (RSTP)
IEEE 802.1X (Security)
IEEE 802.3ab (Copper Gigabit)
IEEE 802.3ad (Link Aggregation)
IEEE 802.3i (10BASE-T)
IEEE 802.3u (Fast Ethernet)
IEEE 802.3x (Flow Control)
IEEE 802.3z (Fiber Gigabit)

Administration Protocols
RFC 1812 (IPv4)
RFC 783 (TFTP)
RFC 768 (UDP)
RFC 791 (IP)
RFC 793 (TCP)
RFC 2474 (DiffServ)
RFC 2131 (DHCP)
RFC 2138 (Radius Authentication)

Management, including MIBs Supported
RFC 1157 (SNMP v1/v2c)
RFC 1213 (MIB II)
RFC 1398 Ethernet MIB
RFC 1493 (Bridge MIB)
RFC 1573 (Private IF MIB)
RFC 1757 RMON MIB
RFC 2011 IP-MIB
RFC 2012 TCP-MIB
RFC 2013 UDP-MIB
RFC 2037 Entity MIB
RFC 2618 (RADIUS Authentication Client MIB)
RFC 2665 Ethernet-MIB
RFC 2674P P-BRIDGE-MIB
RFC 2674Q Q-BRIDGE-MIB
RFC 2737 Entity MIB
RFC 2819 RMON MIB
RFC 2863 IF-MIB
IEEE8021-PAE-MIB (IEEE) (Network Login)

Emissions / Agency Approvals
CISPR 22: 1995; Class A
FCC Part 15 subpart B, Class A
EN 55022: 1998; Class A
ICES -003 Class A
AS/NZS 3548 Class A
EN 61000-3-2: 2000
EN 61000-3-3: 1995 +A1

Immunity
EN 55024: 1998

Safety Agency Certifications
UL 60950-1
IEC 60950: 2001; all national deviations
EN 60950: 2001; all national deviations
CSA 22.2 # 60950-00

Warranty
3 Year hardware warranty. See www.3com.com/warranty for details.
90 day software warranty

Management
SNMP, Web, and Telnet support
RMON-1
RMON Groups: Statistics, History, Alarms and Events
GUI management with 3Com Network Supervisor and other 3Com management offerings

Ordering Information

3Com SuperStack 3 Switch 3870, 24-Port *20-port 10/100/1000 switch with four dual-personality 10/100/1000 or SFP ports*	3CR17450-91
3Com SuperStack 3 Switch 3870, 48-Port *44-port 10/100 switch with four dual-personality 10/100/1000 or SFP ports*	3CR17451-91
3Com SuperStack 3 Switch 3870 Stacking Cable	3C17462
3Com SuperStack 3 Switch 3870 Resilient Stacking Cable	3C17463

SFPs *(multimode, LC connectors)*	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-LH70 (70km) SFP	3CSFP97

Redundant Power	
3Com SuperStack 3 Advanced Redundant Power System	3C16071B
3Com SuperStack 3 Advanced Redundant Power System, 325W Power Module Type 3	3C16075

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To learn more about 3Com solutions, visit www.3com.com. 3Com Corporation is publicly traded on NASDAQ under the symbol COMS.

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